HP 3000 Computer System

HP 3000 Series 40/44 Computer Systems Memory Add-On Installation Manual

HEWLETT PACKARD

COMPUTER SYSTEMS DIVISION, 19447 PRUNERIDGE AVE., CUPERTINO, CALIF. 95014

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LIST OF EFFECTIVE PAGES

The List of Effective Pages gives the date of the current edition and of any pages changed in updates to that edition. Within the manual, any page changed since the last edition is indicated by printing the date the changes were made on the bottom of the page. Changes are marked with a vertical bar in the margin. If an update is incorporated when an edition is reprinted, these bars are removed but the dates remain.

All pages are original issue.

PRINTING HISTORY

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INTRODUCTION AND PROCEDURE

This manual describes how to add memory to an existing HP 3000 Series 40 or Series 44 computer system. The procedure is divided into two parts, one for the Series 40 and one for the Series 44.

Series 40 Memory Add-On Procedure

1. The system should be backed up by the system operator prior to beginning the memory add-on installation.

2. Perform an MPE shutdown.

3. Turn off the processor Power Switch.

4. Remove flat ribbon cable from across the memory controller and memory array boards (J-1 connector).

5. Determine the number of 1/4 Mbyte and/or 1 Mbyte boards to be used.

6. Refer to table 1 and locate the row that corresponds to the configuration determined in step 5.

7. Install the memory arrays as indicated in table 1. It may be necessary to move existing arrays to obtain the desired configuration.

8. Set the thumbwheel settings on the memory arrays as indicated in table 1.

9. Install the flat ribbon cable accross the memory comtroller and memory array boards (J-1 connector).

10. Turn the processor power switch ON and run "PRMDIAG" (located on the DUS tape).

11. Coolstart or cold load the system from the back-up media, reconfiguring for the added memory. Do a sysdump to create new back-up media with the new memory configuration on it.

MEMORY ARRAY COUNT		CONNECTOR LENGTH	TOTAL MEMORY	CARD CAGE Memory Arrays				Controller →
1 Mb	256 Kb	(Slots)	(Mb)	A1	A2	A3	A4	A5
0	1	5	0.25	¼ 0				A
0	2	5	0.50	¼ ¼ 0 1				A
0	3	5	0.75	¼ ¼ ¼ 0 1 2				A
0	4	5	1.00	¼ ¼ ¼ ¼ 0 1 2 3				A
1	0	5	1.00	1 0				A
1	2	5	1.50	1 ¼ ¼ 0 4 5				A
2	0	5	2.0	1 1 0 1				A

← Memory Size (Mb)
← Thumbwheel/Switch Setting

Table 1. Series 40 Memory configurations

Series 44 Memory Add-On Procedure

1. The system should be backed up by the system operator prior to beginning the memory add-on installation.

2. Perform an MPE shutdown.

3. Turn off the processor Power Switch.

4. Determine the number of 1/4 Mbyte and/or 1 Mbyte boards to be used.

5. Refer to table 2 and locate the row that corresponds to the configuration determined in step 4.

Note: To install additional memory in the second card cage of an existing system, there must either be a memory controller in Slot E8 of the second card cage or one must be installed prior to adding memory modules.

6. Remove flat ribbon cable from across the memory controller and memory array boards (J-1 connector) in the card cage where additional memory is to be installed.

7. Remove the memory controller(s) and set the slide switch (S2) near P4 as indicated in table 2. Replace the memory controller(s) in the correct slots(s).

8. In the first card cage, determine which slot corresponds to the left end of the ribbon connector being used. Beginning with this slot, fill the card cage with the memory arrays from left to right as indicated in table 1. It may be necessary to move existing memory arrays to acheive the desired configuration.

Note: Table 2 shows the slot assignments for the maximum ribbon connector length. If you are using a 6 slot ribbon connector in the first card cage, place the leftmost memory array in slot A4.

9. If table 2 indicates that no memory is to be installed in the second card cage, skip to step 11.

10. To install memory in the second card cage, determine which slot corresponds to the right end of the ribbon connector to be used. Beginning with this slot, add memory as indicated in table 2, filling to the left.

Note: Table 2 shows the slot assignments for the maximum ribbon connector length. If you are using a 6 slot ribbon connector in the second card cage, place the rightmost memory array in slot E13.

11. Set the thumbwheel switches of all memory arrays as indicated in table 2. Check the settings carefully!

12. Install the flat ribbon cable accross the memory controller and memory array boards (J-1 connector).

13. Turn the processor power switch ON and run "PRMDIAG" (located on the DUS tape).

14. Coolstart or cold load the system from the back-up media, re-configuring for the added memory. Do a sysdump to create new back-up media with the new memory configuration on it.

MEMORY ARRAY COUNT		CONNECTOR LENGTHS (Slots)		TOTAL MEMORY	CARD CAGE 1 Controller Switch Setting →									CARD CAGE 2 Controller Switch Setting →								
					Memory Arrays										Memory Arrays							
1 Mb	256 Kb	CARD CAGE 1	CARD CAGE 2	(Mb)	A1	A2	A3	A4	A5	A6	A7	A8	A9	E8	E9	E10	E11	E12	E13	E14	E15	E16
0	4	6 or 9	–	1.0	¼ 0	¼ 1	¼ 2	¼ 3					A	–								
0	6	9	–	1.5	¼ 0	¼ 1	¼ 2	¼ 3	¼ 4	¼ 5			A	–								
0	8	9	–	2.0	¼ 0	¼ 1	¼ 2	¼ 3	¼ 4	¼ 5	¼ 6	¼ 7	A	–								
0	10	9	6 or 9	2.5	¼ 0	¼ 1	¼ 2	¼ 3	¼ 4	¼ 5	¼ 6	¼ 7	A	B							¼ 1	¼ 0
0	12	9	6 or 9	3.0	¼ 0	¼ 1	¼ 2	¼ 3	¼ 4	¼ 5	¼ 6	¼ 7	A	B					¼ 3	¼ 2	¼ 1	¼ 0
0	14	9	9	3.5	¼ 0	¼ 1	¼ 2	¼ 3	¼ 4	¼ 5	¼ 6	¼ 7	A	B			¼ 5	¼ 4	¼ 3	¼ 2	¼ 1	¼ 0
0	16	9	9	4.0	¼ 0	¼ 1	¼ 2	¼ 3	¼ 4	¼ 5	¼ 6	¼ 7	A	B	¼ 7	¼ 6	¼ 5	¼ 4	¼ 3	¼ 2	¼ 1	¼ 0
1	0	6	–	1.0				1 0					A	–								
1	2	6 or 9	–	1.5	1 0	¼ 4	¼ 5						A	–								
1	4	6 or 9	–	2.0	1 0	¼ 4	¼ 5	¼ 6	¼ 7				A	–								
1	6	6 or 9	6 or 9	2.5	1 0	¼ 4	¼ 5	¼ 6	¼ 7				A	B							¼ 1	¼ 0
1	8	6 or 9	6 or 9	3.0	1 0	¼ 4	¼ 5	¼ 6	¼ 7				A	B					¼ 3	¼ 2	¼ 1	¼ 0
1	10	6 or 9	6 or 9	3.5	1 0	¼ 4	¼ 5	¼ 6	¼ 7				A	B			¼ 5	¼ 4	¼ 3	¼ 2	¼ 1	¼ 0
1	12	6 or 9	9	4.0	1 0	¼ 4	¼ 5	¼ 6	¼ 7				A	B	¼ 7	¼ 6	¼ 5	¼ 4	¼ 3	¼ 2	¼ 1	¼ 0
2	0	6 or 9	–	2.0	1 0	1 1							A	–								
2	2	6 or 9	6 or 9	2.5	1 0	1 1							A	B							1 4 1 0	
2	4	6 or 9	6 or 9	3.0	1 0	1 1							A	B					¼ 3	¼ 2	¼ 1	¼ 0
2	6	6 or 9	9	3.5	1 0	1 1							A	B			¼ 5	¼ 4	¼ 3	¼ 2	¼ 1	¼ 0
2	8	6 or 9	9	4.0	1 0	1 1							A	B	¼ 7	¼ 6	¼ 5	¼ 4	¼ 3	¼ 2	¼ 1	¼ 0
3	0	6 or 9	–	3.0	1 0	1 1	1 2						M	–								
3	2	6 or 9	6 or 9	3.5	1 0	1 1							A	B						¼ 5	¼ 4	1 2
3	4	6 or 9	6 or 9	4.0	1 0	1 1							A	B				¼ 7	¼ 6	¼ 5	¼ 4	1 2
4	0	6 or 9	–	4.0	1 0	1 1	1 2	1 3					M	–								

Table 2. Series 44 Memory Configurations